IT2120 - Probability and Statistics Lab 06

IT24101573
Samaranayake H.D.I.M

Exercise

```
getwd()
setwd("C:\\Users\\Lenovo\\Desktop\\Lab06")
getwd()
```

01)

i) Distribution of X - X follows a Binomial distribution with parameters n = 50 and p = 0.85

```
n <- 50
p <- 0.85
```

ii)

```
prob_geq_47 <- 1 - pbinom(46, size = 50, prob = 0.85)
prob_geq_47
```

```
> prob_geq_47 <- 1 - pbinom(46, size = 50, prob = 0.85)
> prob_geq_47
[1] 0.04604658
```

02)

i) Random Variable X - X represents the number of customer calls received per hour.

ii) Distribution of X - X follows a Poisson distribution with parameter λ = 12.

iii)

```
prob_15_calls <- dpois(15, lambda = 12)
prob_15_calls
```

```
> prob_15_calls <- dpois(15, lambda = 12)
> prob_15_calls
[1] 0.07239112
```